water intake structure, put temporary pipes in the river and pumped water when it wished. In this variant of the scenario, which in fact occurred in the recent droughts in North Carolina, it might be very difficult for the downstream industry or community water system even to know who was taking the water, and thus whom to negotiate with or to sue. An agricultural irrigator is allowed to withdraw up to one million gallons per day without even reporting its withdrawal, and the pipes can be hard to see from the air.

2. Private firm pumps groundwater and uses or exports it, even while adjoining farmer's wells dry up.

Imagine a farm in North Carolina that relies on groundwater wells to supply water for its livestock—cattle and poultry. Livestock watering needs are not large, but streams in the Piedmont and mountains sometimes do not have enough reliable flow for assured watering, so wells and farm ponds are important agricultural water sources. Now imagine that a private firm buys an adjoining farm and installs large production wells to supply water for its own manufacturing needs. This could be for process water or to bottle water for export and sale. The new wells lower the water table and the farmer's wells go dry. The farmer drills new wells, but after spending tens of thousands of dollars drilling, still cannot find enough water to meet the farm's needs.

In this scenario, not only is there no help for the farmer from state or local executive branches of government, it is quite possible that the courts will award no damages or other relief. In the case of Bayer v. Nello Teer (1962), the North Carolina Supreme Court held that one property owner can extract groundwater and thereby damage another property owner's well without having to compensate the other property owner, so long as the first property owner is making reasonable use of water (not wasting it) on its own property.

The case might come out differently if the new wells were being used to bottle water for sale elsewhere. The law is unclear on this in North Carolina. If the new wells were being used to supply a nearby community water system, it is likely that the farmer would win an award of damages, under the reasoning of Rouse v. City of Kinston (1924), although the later *Bayer* case raises some questions about the continuing viability of *Rouse*.

What is clear is that the only state or local government remedy at present for conflicts over groundwater is the creation of a capacity use area (CUA). This statutory process requires the Environmental Management Commission (EMC) to find:

> the aggregate uses of groundwater or surface water, or both, in or affecting said area (i) have developed or threatened to develop to a degree which requires coordination and regulation, or (ii) exceed or threaten to exceed, or otherwise threaten or impair, the renewal or replenishment of such waters or any part of them.

North Carolina Gen. Stat. § 143-215.13(b). This procedure has been very useful for addressing generalized groundwater problems in the coastal plain, as discussed below in this report. But its usefulness in the Piedmont and mountains, with their very different, more complex groundwater geology, and in highly localized disputes is questionable. All of